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25670 7590 05/16/2007 WILLIAM L. PARADICE, III 4880 STEVENS CREEK BOULEVARD SUITE 201 SAN JOSE, CA 95129			EXAMINER WU, JIANYE	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/613,629

Applicant(s)

SRINIVASAN ET AL.

Examiner

Jianye Wu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claim 1, 9-10, 22-26, 31-32, 35 and 38** are rejected under 35 U.S.C. 102(b) as being anticipated by Blake et al, "An Architecture for Differentiated Services", RFC 2475, December, 1998, herein after being referenced as **Blake**.

Regarding **Claim 1**, Blake discloses a traffic management processor (Figure 1, page 16) for processing a plurality of different traffic flows on a per-flow basis, each traffic flow including any number of packets each including a flow ID (DS codepoint in page 4) indicating to which traffic flow the packet belongs, comprising:

means for tracking each packet (Classifier in Figure 1, page 16) according to its flow ID (DS codepoint in page 4); and

means for scheduling each packet (Traffic conditioner, Page 7, in view of Figure 1 in Page 16) according to its flow ID (DS codepoint in page 4).

Regarding **claim 9**, Blake discloses the traffic management processor of Claim 1 (as applied to claim 1 above), further comprising: means for (Traffic conditioner, page 7) independently policing each of the traffic flows.

Regarding **claim 10**, Blake discloses the traffic management processor of Claim 9 (as applied to claim 9 above), wherein the means for independently policing comprises:

a parameter table (traffic profiles, Page 15), having a plurality of rows each for storing one or more flow parameters (traffic profiles, first paragraph of Section 2.3.2, Page 15) for a queued packet; and

policing logic (Traffic conditioner, page 7) coupled to the parameter table (traffic profiles, first paragraph of Section 2.3.2, Page 15), the policing logic (Marker, Page 5) for generating a packet accept flag (Marking, Page 5), for an incoming packet in response to one or more flow parameters corresponding to a queued packet that has the same flow ID (DS codepoint in page 4) as the incoming packet (3rd paragraph of Section 2.3.2 in Page 15, where accept flag is equivalent to "in-profile").

Regarding **claim 22**, Blake discloses a method for processing a number of traffic flows (Fig 1, Page 16), each including one or more packets, comprising:

receiving an incoming packet (the input to Classifier in Fig 1, Page 16);

determining which traffic flow on a per-flow basis the incoming packet belongs to (Classifier in Fig 1, Page 16); and

scheduling the incoming packet for departure according to which traffic flow the packet belongs (Meter and marker in Fig 1, Page 16).

Regarding **claim 23**, Blake discloses the method of Claim 22 (as applied to claim 22), wherein the incoming packet includes an ID (DS codepoint, 3<sup>rd</sup> bullet in page 3, or page 4), indicating to which traffic flow the incoming packet belongs.

Regarding **claim 24**, Blake discloses the method of Claim 23 (as applied to claim 23), wherein the determining comprises:

comparing the flow ID of the incoming packet with the flow of previously queued packets (Classifier in Fig 1, Page 16 and Section 2.3.1, page 14); and

selectively asserting a match flag in response to the comparing ("receive a differentiated service" in Second paragraph, Section 2.3, page 14).

Regarding **claim 25**, Blake discloses the method of Claim 24 (as applied to claim 24), wherein the scheduling comprises:

calculating a departure time for the incoming packet relative to the departure time of a previously received packet of the same traffic flow (Meter and Shaper in Fig 1, Page 16 and Section 2.3.3.1, page 16) if the match flag is asserted ("in-profile", Section 2.3.3.1, page 16); and

calculating a departure time for the incoming packet relative to the packet's arrival time (Meter in Fig 1, Page 16 and Section 2.3.3.1, page 16) if the match flag is not asserted ("out-of-profile", and Section 2.3.3.1, page 16).

Regarding **claim 26**, Blake discloses the method of Claim 25 (as applied in Claim 25), wherein the scheduling further comprises:

comparing the departure times of the packets with each other to determine which departure time is the earliest (Shaping, Page 7); and

transmitting the packet that has the earliest departure time (Shaping, Page 7, and shaper in Figure 1 in Page 16).

Regarding **claim 31**, Blake discloses the method of Claim 22 (as applied to claim 22), further comprising policing the incoming packet (Shaper/Droper in Fig. 1, page 16) for acceptance according to which traffic flow the packet belongs.

Regarding **claim 32**, Blake discloses the method of Claim 31 (as applied to claim 31), wherein each traffic flow is independently policed using a leaky bucket technique (token bucket meter, Section 2.3.2, Page 15).

Regarding **claim 35**, Blake discloses the traffic management processor of Claim 1, wherein the different traffic flows are not aggregated (Figure 1, page 16, which handles all kinds of traffic including those that are not aggregated).

Regarding **claim 38**, Blake discloses the method of Claim 22, wherein the traffic flows are not aggregated (Fig.1, Page 6, which handles all kinds of traffic including those that are not aggregated).

3. Claim **12-21** and **36-37** are rejected under 35 U.S.C. 102(b) as being anticipated by Ohgane et al, "Communication Control Device and Method for use in an ATM System Operable in an ABR Mode", Feb. 23, 1999.

Regarding **claim 12**, Ohgane discloses a traffic management processor (FIG. 1) for managing a number of traffic flows each including one or more packets, comprising:  
a CAM device (27 of FIG. 1) having a plurality of rows, each row (FIG.6, and last paragraph of Col 8) storing a flow ID (VC, last paragraph of Col 8) for a corresponding packet, the flow ID indicating to which traffic flow the packet belongs;

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a departure time table (511, FIG. 4) including a plurality of rows, each coupled to a corresponding row of the CAM device (27 of FIG. 1) and configured to store a departure time for the corresponding packet; and

compare logic (512, 515, and 516 of FIG. 4, and second paragraph of Col. 8) having inputs coupled to corresponding rows the departure time table, the compare logic for comparing the departure times (3<sup>rd</sup> paragraph of Col. 8) with each other to determine which departure time is the earliest.

Regarding **claim 13**, Ohgane discloses the traffic management processor of Claim 12 (as applied in Claim 12 above), further comprising a priority encoder coupled to the compare logic, the priority encoder (514 combined with 512, 515, and 516 in FIG. 4) generating an address of the row in the departure time table that contains the earliest departure time;

Regarding **claim 14**, Ohgane discloses the traffic management processor of Claim 13 (as applied in Claim 13 above), wherein each row of the CAM device includes a most recently received bit (cell\_sent flag, last paragraph of Col. 8) indicates whether the corresponding packet is the most recently received packet for its traffic flow.

Regarding **claim 15**, Ohgane discloses the traffic management processor of Claim 14 (as applied in Claim 14 above), wherein priority encoder 14 (Priority Encoder 514 combined with 511, 512, 513, 515, 516 in FIG. 4) is configured to generate a next free address in the CAM device in response to the most-recently received bits.

Regarding **claim 16**, Ohgane discloses the traffic management processor of Claim 12 (as applied in Claim 12 above), wherein the CAM device is configured to

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compare a flow ID received for an incoming packet with the flow ID's stored in the CAM device (last paragraph of Col. 8).

Regarding **claim 17**, Ohgane discloses the traffic management processor of Claim 16 (as applied in Claim 16 above), further comprising:

match logic having a plurality of inputs, each coupled to a corresponding row of the CAM device, the match logic generating a match flag in response to match conditions in the CAM device; and

a DTC circuit (Transmission Time Deriving Section, 34 of FIG. 2) having an input receive the match flag (in control memory 27, via 30, 35, and 36 in FIG. 2, the last paragraph of Col. 6).

Regarding **claim 18**, Ohgane discloses the traffic management processor of Claim 17 (as applied in Claim 17 above), wherein DTC circuit calculates a departure time (3<sup>rd</sup> paragraph of Col. 7) for the incoming packet relative to the departure time of a previously received of the same traffic flow if the match flag is asserted.

Regarding **claim 19**, Ohgane discloses the traffic management processor of Claim 15 (as applied in Claim 17 above), wherein the DTC circuit calculates a departure time (3<sup>rd</sup> paragraph of Col. 7) for the incoming packet relative to the packet's arrival time if the match flag is not asserted.

Regarding **claim 20**, Ohgane discloses the traffic management processor of Claim 12 (as applied in Claim 12 above), further comprising:

a parameter table (FIG. 6) having a plurality of rows, each coupled corresponding rows of the CAM device and the departure time table (511, FIG. 4), each row of the



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parameter table for storing one or more flow parameters for a corresponding queued packet; and

policing logic (514 and 511, 512, 513, 515, 516 of FIG. 4) coupled to the parameter table, the policing logic determining whether to accept or reject an incoming packet in response to one or more flow parameters selectively provided by the parameter table.

Regarding **claim 21**, Ohgane discloses the traffic management processor of Claim 20 (as applied in Claim 20 above), wherein the policing logic comprises:

means for accessing (254 of FIG 1, and the last paragraph in Col. 8) a packet size parameter for the incoming packet;

means for (254 of FIG 1, and the last paragraph in Col. 8) accessing one or more flow parameters from the table for the previously received packet of the same traffic flow;

means for (254 of FIG 1, and the last paragraph in Col. 8) calculating a bucket size parameter using the one

or more flow parameters; and

means for (254 of FIG 1, and the last paragraph in Col. 8) comparing the bucket size parameter with the packet size parameter to generate a packet accept flag for the incoming packet.

Regarding **claim 36**, Ohgane discloses the traffic management processor of Claim 12, wherein the traffic flows are not aggregated (the management processor handles all kinds of traffic including those that are not aggregated).

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Regarding **claim 37**, Ohgane discloses the traffic management processor of Claim 12, wherein the traffic flows are managed on a per-flow basis (the management processor handles all kinds of traffic including those that are not aggregated).

***Claim Rejections – 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claim 2-8, 27-30 and 33-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Blake et al, "An Architecture for Differentiated Services", RFC 2475, December, 1998 in view of Ohgane et al, "Communication Control Device and Method for use in an ATM System Operable in an ABR Mode", Feb. 23, 1999.

Regarding **claim 2**, the traffic management processor of Claim 1, wherein the means for tracking comprises: a CAM device having a plurality of rows, each for storing the flow ID for a corresponding packet.

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Blake discloses everything in Claim 1 (as applied to Claim 1), but fails to explicitly disclose CAM.

Ohgane discloses a memory device (27 of FIG.1) having a plurality of row (FIG. 6, one row per VC).

The memory device can be implemented in CAM, which is often used in network devices to improve performance. In addition, implementing methods/algorithms in hardware memory devices (such as CAM) is conventional in the art and this examiner takes Office Notice of this notion. The advantages of this include great improvement of performance and reliability.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Blake with Ohgane to produce a system implementing methods taught by Blake with memory devices disclosed by Ohgane because of the performance improvement and reliability.

Regarding **claim 3**, Blake and Ohgane disclose the traffic management processor of Claim 2 (as applied to Claim 2), Ohgane further discloses that the CAM device holds the most recently received packet (information of the packet is stored in control memory 27, the last paragraph of Column 8) for its traffic flow (VC, the last paragraph of Col. 8).

Regarding **claim 4**, Blake and Ohgane disclose the traffic management processor of Claim 2 (as applied to Claim 2), Blake further discloses using the flow ID of an incoming packet as flow ids (DS codepoint, 3<sup>rd</sup> bullet in page 3, or page 4).

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Regarding **claim 5**, Blake and Ohgane disclose the traffic management processor of Claim 4 (as applied to Claim 4), Ohgane further discloses means for calculating a departure time (Transmission Time Deriving Section, 34 of FIG. 2) for the incoming packet.

Regarding **claim 6**, Blake and Ohgane disclose the traffic management processor of Claim 5 (as applied to Claim 5); Ohgane further discloses wherein the means for scheduling comprises:

a DTC circuit for generating the departure times (Transmission Time Deriving Section, 34 of FIG. 2); and

a departure time prioritizer (Priority Encoder 514 and 511, 512, 513, 515, 516 of FIG. 4) coupled to the DTC circuit and for determining which of the departure times is the earliest.

Regarding **claim 7**, Blake and Ohgane disclose the traffic management processor of Claim 6 (as applied to Claim 6), Ohgane further discloses wherein the departure time prioritizer comprises:

a table having a plurality of rows (511 of Fig. 4), each for storing the departure time for a corresponding packet; and

compare logic (combination of 512-516 in FIG. 4) coupled to the table, the compare logic configured to compare the departure times with each other to determine which row contains the earliest departure time (FIG. 5, the packet with the earliest departure time is sent).

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Regarding **claim 8**, Blake and Ohgane disclose the traffic management processor of Claim 7 (as applied in Claim 7), further comprising:

a priority encoder (512 in FIG. 4) coupled to the compare logic, the priority encoder generating an address of the row in the table (511 of FIG. 4) contains the earliest departure time.

Regarding **claim 27**, Blake discloses the method of Claim 22 (as applied in Claim 22), but does not explicitly disclose storing the “most recently received bit” that is related to each packet.

Ohgane disclose storing a most recently received bit (cell\_sent flag, last paragraph of Col. 8) for each packet.

Implementing methods/algorithms in hardware memory devices (such as CAM) is conventional in the art and this examiner takes Office Notice of this notion. The advantages of this include great improvement of performance and reliability.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Blake with Ohgane to produce a system implementing methods taught by Blake with memory devices disclosed by Ohgane because of the performance improvement and reliability.

Regarding **claim 28**, Blake and Ohgane disclose the method of Claim 27 (as applied in Claim 27); Ohgane disclose further discloses:

asserting the most-recently received bit (cell\_sent flag, GIG 5) for the incoming packet; and

de-asserting the most-recently received bit (cell\_sent flag, FIG 5) of a previously received packet of the same traffic flow as the incoming packet.

Regarding **claim 29**, Blake and Ohgane disclose the method of Claim 27 (as applied in Claim 27); Ohgane discloses further discloses:

storing the departure times for all packets together in a departure time table (511 of FIG. 4).

Regarding **claim 30**, Blake and Ohgane disclose the method of Claim 29 (as applied in Claim 27); Ohgane further discloses selectively deleting entries (retrieving mode operation, 4<sup>th</sup> paragraph of Col. 8) from the table in response to the most recently received bit.

6. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Blake et al, "An Architecture for Differentiated Services", RFC 2475, December, 1998 in view of Heinanen et al, "A Single Rate Three Color Marker", RFC2697, September, 1999.

Regarding **claim 11**, Blake discloses the traffic management processor of Claim 10 (as applied to claim 10 above), wherein the policing logic comprises:

means for accessing the one or more flow parameters (traffic profile, Page 8) from the parameter table (traffic profile, first paragraph of Section 2.3.2, Page 15) for a previously queued packet that has the same flow ID as the incoming packet (traffic processor defined in Fig. 1, Page 16);

means for calculating a bucket size parameter using the one or more flow parameters (Traffic conditioner, Page 7, policing traffic flow using parameters defined in traffic profile); and

Blake fails to explicitly disclose packet size parameter and the comparison of the bucket size parameter with the packet size parameter to generate the packet accept flag.

Heinanen discloses packet size parameter (Packet size B, 3<sup>rd</sup> paragraph, Page 3) and the comparison of the bucket size parameter with the packet size parameter to generate the packet accept flag (color of a packet, 2<sup>nd</sup> paragraph from bottom, Page 3).

Blake is explicitly cited as one of the references (Last reference in Page 6) in Heinanen because Heinanen is written under the framework taught by Blake for easy implementation.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Blake with Heinanen because Heinanen is written under the framework taught by Blake for easy implementation.

Regarding **claim 33**, Blake discloses the method of Claim 31(as applied in Claim 31), wherein the policing comprises accessing a bucket size parameter for the incoming packet's traffic flow; it fails to disclose accessing a packet size parameter and comparing the bucket size parameter to the packet size parameter;

Heinanen discloses accessing a packet size parameter (Packet size B, Page 3) and comparing the bucket size parameter to the packet size parameter (Last 3 paragraphs in Page 3);

Blake is explicitly cited as one of the references (Last reference in Page 6) in Heinanen because Heinanen is written under the framework taught by Blake for easy implementation.

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Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Blake with Heinanen because Heinanen is written under the framework taught by Blake for easy implementation.

Regarding **claim 34**, Blake and Heinanen disclose the method of Claim 33 (as applied in Claim 31 above); Heinanen further discloses decreasing the bucket size parameter by an amount of the packet size parameter if the incoming packet is accepted (Last 3 paragraphs in Page 3).

### ***Response to Arguments/Remarks***

7. Applicant's arguments filed on 3/28/2007 have been fully considered but they are not persuasive.

8. For remarks of claims 1-11 (4th line from the bottom of Page 10 to Line 12 of Page 13), particularly representative claim 1, Applicants argue that "Blake fails to disclose or suggest a traffic management processor that processes different traffic flows on a per-flow basis". The main point of the argument seems to focus on the point that packets belong to a traffic flow in the application is different from packets belong to a traffic type disclosed by Blake.

In response, Examiner respectfully disagrees. According to MPEP claims should be given "the broadest reasonable interpretation" (Bullet 2 of H Subsection in MPEP 708(a)). What Blake disclose for the packets belong to a traffic type is a set of packets that have the same ID (DS codepoint); upon which the same set of rules will be applied when being processed (scheduled), which conceptually is exactly the same as the packets belong to a traffic flow as described in the application. Applicants seem to



interpret a traffic type narrowly only as the aggregation of multiple traffic flows.

However, a traffic type can easily be interpreted as having only one traffic flow and is therefore identical to a traffic flow.

9. For remarks of claims 22-34 (from Line 14 of Page 13 to Line 23 of Page 14), particularly representative claim 22, Applicants use the same reason as that of Claim 1.

In response, the explanation to Claims 1 presented above is applied.

10. For remarks of claims 12-21 (from Line 25 of Page 14 to Line 22 of Page 16), particularly representative claim 12, Applicants argue that "Ohgane fails to disclose or suggest the traffic management processor of Applicants' Claim 12." (Lines 7-8 of Page 15) Due to the following reasons:

a) "The Office Action seems to equate the Figure 6 table of Ohgane's control memory 27 with the CAM device recited in Applicants' Claim 12." (Lines 9-10 of Page 15);

b) "the virtual channel of Ohgane is NOT a flow ID that indicates which traffic flow a packet belongs to" (Lines 20-21 of Page 15);

c) Ohgane does not disclose an equivalent "compare logic for comparing departure times" as recited in Claim 12.

In response, Examiner respectfully disagrees.

First, a CAM is normally referred to as a hardware device with a combination of logic and memory that is capable of processing a group of packets/cells/frames quickly and independently without the intervention of CPU, which is widely used in the industry as shown by Ohgane. There is nothing novel in using a CAM device to process packets;

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Secondly, the device shown by Ohgane (Fig. 1) is conceptually identical to the CAM device recited by the application as explained in details above; particularly:

a) The Office Action equates Fig. 1 (the combination of 25 and 27) of Ohgane to the CAM device recited in Applicants' Claims 12, not memory 27 alone (Note: Fig. 6 does not show memory 27, Fig. 1 does as cited in the first Office Action);

b) CELL HEADER as shown in Fig. 6 include a component of vpi/vci that is used to identify traffic flow and is equivalent to a flow ID; it is well known in the art that every ATM cell header has a vpi/vci and any person with the ordinary skill in the art knows it;

c) Ohgane clearly shows a "compare logic for comparing departure times" in Fig. 4 as SELECTOR 516.

11. Regarding remarks for claim rejection under USC 103(a) with respect to claims 2-8, 27-30 and 33-34 (from Line 24 of Page 16 to Line 1 of Page 17), Applicants use the same reasoning as that of Claim 1.

In response, the explanation presented above for Claim 1 is applied.

12. Applicant arguments with respect to new claims 35-38 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianye Wu whose telephone number is (571)270-1665. The examiner can normally be reached on Monday to Friday, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571)272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

*Lana L*  
5-03-07  
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PRIMARY EXAMINER